CLAIMS:

1.   A system for data transmission comprising:

a transmitting system comprising a first lexicon including a plurality of digital sequence to unique
5   identifier correspondences;

a receiving system;

a transmission medium coupling said transmitting and receiving systems, said transmitting system capable of transmitting at least one of said plurality
10   of unique identifiers to said receiving system in lieu of said at least one corresponding digital sequence.

2.   The system of claim 1 comprising:

another system capable of receiving at least one of said plurality of unique identifiers from one of
15   said transmitting or receiving systems.

3.   The system of claim 1 wherein said receiving system comprises a second lexicon including a plurality of digital sequence to unique identifier correspondences.

20   4.   The system of claim 2 wherein said another system comprises another lexicon including a plurality of digital sequence to unique identifier correspondences.

5.   The system of claim 1 wherein said unique identifiers are based upon hashes of said
25   corresponding digital sequences.

6.   The system of claim 1 wherein said unique identifiers are based upon sequential identifiers for said corresponding digital sequences.

7. The system of claim 1 wherein said unique identifiers are based upon a hash based file system.

8. The system of claim 1 wherein a digital sequence to be transmitted from said transmitting system to
5   said receiving system is factored into a number of digital sequence chunks for which corresponding unique identifiers are ascribed.

9. The system of claim 8 wherein said digital sequence to be transmitted is factored by means of
10 sticky byte factoring.

10. The system of claim 1 wherein said first lexicon further comprises information regarding a contents of other lexicons in said system.

11. The system of claim 3 wherein said first and
15 second lexicons comprise information regarding a content of other lexicons in said system.

12. The system of claim 1 wherein data transmissions within said system are effectuated on a point-to-point basis.

20 13. The system of claim 1 wherein data transmissions within said system are effectuated on a point-to-multipoint basis.

14. The system of claim 1 wherein data transmissions are routed in said system based on metrics derived
25 from said first lexicon.

15. A method for data transmission comprising:

    providing a transmitting system comprising a first lexicon including a plurality of digital sequence to unique identifier correspondences;

5   providing a receiving system;

    coupling said transmitting and receiving systems through a transmission medium, said transmitting system capable of transmitting at least one of said plurality of unique identifiers to said receiving

10   system in lieu of said at least one corresponding digital sequence.

16. The method of claim 15 comprising:

    providing another system capable of receiving at least one of said plurality of unique identifiers from

15   one of said transmitting or receiving systems.

17. The method of claim 15 wherein said receiving system comprises a second lexicon including a plurality of digital sequence to unique identifier correspondences.

20   18. The method of claim 16 wherein said another system comprises another lexicon including a plurality of digital sequence to unique identifier correspondences.

19. The method of claim 15 wherein said unique

25   identifiers are based upon hashes of said corresponding digital sequences.

20. The method of claim 15 wherein said unique identifiers are based upon sequential identifiers for said corresponding digital sequences.

21.   The method of claim 15 wherein said unique
identifiers are based upon a hash based file system.

22.   The method of claim 15 further comprising:
         factoring a digital sequence to be transmitted
5   from said transmitting system to said receiving system
into a number of digital sequence chunks; and
         ascribing corresponding unique identifiers
therefor.

23.   The method of claim 22 wherein said step of
10   factoring is carried out by means of sticky byte
factoring.

24.   The method of claim 15 wherein said first lexicon
further comprises information regarding a contents of
other lexicons in said system.

15   25.   The method of claim 17 wherein said first and
second lexicons comprise information regarding a
content of other lexicons in said system.

26.   The method of claim 15 wherein data transmissions
within said system are effectuated on a point-to-point
20   basis.

27.   The method of claim 15 wherein data transmissions
within said system are effectuated on a point-to-
multipoint basis.

28.   The system of claim 15 further comprising:
25   routing data transmissions in said system based
on metrics derived from said first lexicon.

29.   A system for symbolic exchange of digital
sequences comprising:

first and second computer systems comprising
respective first and second local lexicons including a
5 plurality of digital sequence to unique identifier
correspondences;

a transmission medium coupling said first and
second computer systems;

said first computer system operative to transmit
10 a first unique identifier to said second computer
system in lieu of said corresponding digital sequence.

30.   The system of claim 29 wherein said second
computer system is operative to compare said first
unique identifier to a contents of said second local
15 lexicon and request said first computer system to
transmit said corresponding digital sequence to said
first unique identifier if said first unique
identifier is not present in said second lexicon.

31.   The system of claim 29 wherein said first
20 computer system is operative to transmit said
corresponding digital sequence to said first unique
identifier if said first computer system is aware that
said second lexicon does not contain said unique
identifier.

25 32.   The computer system of claim 31 wherein said
second computer system is operative to add said
corresponding digital sequence to said first unique
identifier to said second local lexicon if not
previously contained therein.

33. The computer system of claim 31 further comprising:

a third computer system comprising a third local lexicon including a plurality of digital sequences to unique identifier correspondences, said third computer system coupled to one of said first or second computer systems and operative to receive a first unique identifier therefrom in lieu of said corresponding digital sequence.

34. The computer system of claim 29 wherein said transmission medium comprises a network.

35. The computer system of claim 34 wherein said network comprises the Internet.

36. The computer system of claim 29 wherein said unique identifiers are based upon a hash of said corresponding digital sequence.

37. The computer system of claim 29 wherein said digital sequence comprises a file.

38. The computer system of claim 29 wherein said digital sequence comprises a video stream.

39. A method for symbolic exchange of digital sequences between first and second computer systems including respective first and second local lexicons containing a plurality of digital sequence to unique identifier correspondences, said method comprising:

transmitting a first unique identifier from said first computer system to said second computer system in lieu of said corresponding digital sequence.

40. The method of claim 39 further comprising:

comparing said first unique identifier to said contents of said second local lexicon; and

requesting said first computer system to transmit

5   said corresponding digital sequence to said first unique identifier if said first unique identifier is not present in said second lexicon.

41. The method of claim 39 further comprising:

transmitting said corresponding digital sequence

10   to said first unique identifier if said first computer system is aware that said second lexicon does not contain said unique identifier.

42. The method of claim 40 further comprising the step of:

15   adding said corresponding digital sequence to said first unique identifier to said second local lexicon in not previously present therein.

43. The method of claim 39 further comprising the step of:

20   providing a third computer system comprising a third local lexicon including a plurality of digital sequence to unique identifier correspondences;

coupling said third computer system to one of said first or second computer systems; and

25   receiving a first unique identifier from said one of said first or second computer systems in lieu of said corresponding digital sequence.

44. The method of claim 39 wherein said unique identifiers are based upon a hash of said

30   corresponding digital sequence.

45.   The method of claim 39 wherein said digital sequence comprises a file.

46.   The method of claim 39 wherein said digital sequence comprises a video stream.